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Meeting for Business, Sept. 29, 1846,

VICE PRESIDENT MORTON in the Chair.

The committee on Dr. Leidy's paper, on a new genus and species of Entozoa, reported in favor of publication.

Description of a new genus and species of Entozoa.

BY JOSEPH LEIDY, M. D.

In the course of an investigation of the anatomical structure of the terrestrial gasteropoda of the United States, I discovered a microscopic entozoon inhabiting the fluid contained in the vessie copulatrice or spermatheca of Helix albolabris, since which I have found it to exist in two other species, Helix tridentata, and Helix alternata, and I have no doubt of its existence in others, not yet having had an opportunity of examining further. As there appears to be no known genus in which this animal can be placed, I have been necessitated to form the following:

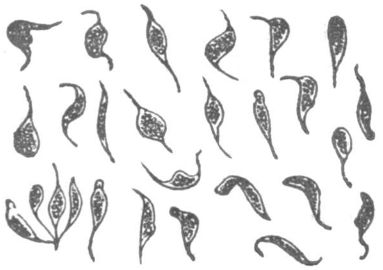
Cryptobia. Animal minute; form exceedingly proteoid; internal organization cellular or granular.

C. helicis. Colorless; form, ordinarily elongate, ellipsolid, fusiform, or ovate; caudated, caudæ opposite, one longer than the other. Internal granular structure consisting of two large cells and numerous minute granules. Total length from the 126th to the 100th of a line. Habitat, the vessie copulatrice or spermatheca of Helix albolabris, Helix tridentata and Helix alternata.

The name of this genus is derived from *κρυπτὸς*, hidden and *βιόω*, to live. This singular entozoon in its general appearance and organization appears to be intermediate between Cercaria seminis and Filaria. Its varied form and movements are curious to observe; at one moment globular, then oval, ovate, fusiform, sigmoid, crescentic, &c., it appears as if it would outvie the kaleidoscope in its changes. The motions are vibratile, rotary, with a lateral progression, or whirling in circles like the insect Gyrinus.

Cryptobia helicis might be confounded with the spermatozoa of the animals in which they are parasitic, on account of the organ in which they are found being connected with the generative apparatus, and its supposed use as a spermatheca, but they may be readily distinguished ; the spermatozoa of Helices generally having either a uniform sigmoid or a beaded body, with an enormous proportionate length of tail, and a slow, vibratile motion. It may be well to mention that C. helicis does not exist in the collapsed state of the generative organs.

The subjoined sketch represents some of the principal forms of the animal, highly magnified.



The committee on the following description, by Dr. Morton, of two living Hybrid Birds, reported in favour of publication.

Description of two living Hybrid Fowls, between GALLUS *and* NUMIDA.

By SAMUEL GEORGE MORTON, M. D.

The singular birds which form the subject of this communication, were bred on a farm about seven miles from Wilmington, in the State of Delaware. The person who raised them states, that the eggs that produced them differed in no respect from those of the guinea fowl, were part of a large number that were hatched at the same time, and that the birds are known to be just four years old. My friend, Mr. Augustus E. Jessup, having accidentally observed these birds on the above mentioned farm, purchased them of the proprietor, and sent them to my care, with a request that they might be eventually placed in the Collections of the Academy. Both are yet living and in good health ; and the following description, in which I have been materially assisted by my friend Mr. William Gambel, has been drawn up after many examinations, made during a month and upwards that the birds have been in the charge of Mr. Robert Kilvington, horticulturist of this city.

The first of these birds is mottled with the colour of a reddish brown chicken and guinea fowl, (Numida meleagris.) Back and rump lineated with darkish brown and whitish, and a tinge of yellowish brown. Greater wing-coverts, and margins of secondaries, reddish brown; breast, belly, sides and under tail-coverts, dirty white, with scattering feathers of the same. Quills and tail-feathers dusky brown, lineated, and finely speckled like those of the guinea fowl. Two quills in one wing and one in the tail are entirely white. Wings concave and rounded, one foot in length from flexure. First quill an inch and a half shorter than the second, which last is one inch shorter than the third; 3—8 quills about equal. Tail of fifteen feathers, rounded; the two middle ones longest and pointed.

Heads sparsely covered with feathers, almost bare for a considerable distance around the eye. Upper mandible dusky, except at tip, which, with the lower mandible, is whitish; towards the base it is somewhat striated, and covered by a reddish, fleshy cere, elongated at the angle of the mouth into barbles, which, however, are only rudimentary in comparison with those of the guinea fowl. Beneath the skin a distinct, hard, bony ridge can be felt, extending over the top of the head. Another bony ridge extends over the eye, giving it a sunken appearance. The nostrils are half closed by a fleshy membrane; sides of head and front, white. Top of head and nape with linear black feathers, elongated on the nape into hackles. Neck and upper part of the breast reddish-brown. Tarsus very stout, with large, divided scutellæ; length 3½ inches; middle toe and nail 2¾ inches. Total length about two feet.

The *second* of these birds bears yet more resemblance to a guinea fowl, both in shape and colour, than the preceding, not being so much mottled with reddish-brown feathers, but principally with white. The bill appears to be not so much arched; the upper mandible is barbled as in the other, and the head is in general the same. Back, shoulders and upper tail-coverts dusky, lineated with whitish like the guinea fowl; greater wing-coverts, fading into white, the tertiaries being margined with the same. One quill white. Quills like the other as to colour and markings; 3d to 6th nearly equal. From flexure the wing measures 11½ inches.

Back of head and neck with black linear feathers, not so much like hackles, as those of the other bird. Breast, beneath and sides, whitish. Tail nearly plucked out, as in the other; upper tail-coverts, full and pendant. The bare flesh around the eye in both birds is tinged with blue.

The sounds which these birds utter are also intermediate, but partake much more of the harshness of the guinea fowl, although they occasionally *cluck* not unlike the common hen.

They are shy, wild and resentful, boldly attacking any one who irritates them. They have several times escaped from custody, and flown a hundred yards or more, when they alight and run with great celerity.

The sex of these birds has not been determined with certainty, but the male characters seem to predominate. During the four years they were on the farm, they were never observed to have sexual intercourse with any other fowls. It is designed on a future occasion to notice their anatomical peculiarities, when the productive organs will be carefully examined.

It has been remarked by a distinguished naturalist, that "many of the birds which compose the gallinaceous order, appear to be less difficult to unite with strange species, than those of any other order. From the great majority of pheasants, mongrels may thus be produced; all the Hoccos (Crax) will couple together in a state of domestication; the pheasant will ally with the cock; the last with the turkey, with which the hoccos born in the domestic state will also unite. It appears, in fact, very possible to produce mongrels from the major part of those gallinæ which are suceptible of cultivation."*

The latter remark receives strong corroboration from the facts we have adduced in this paper; and we believe that a hybrid progeny between the guinea fowl and common fowl is now for the first time made known to naturalists. The fact derives its peculiar interest from the remoteness of the genera which have thus produced an intermediate variety.

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* Griffith's Cuvier, VIII. pp. 173, 175, 176. Prichard, Researches into the Physical History of Mankind, 1, p. 140. 3d ed.

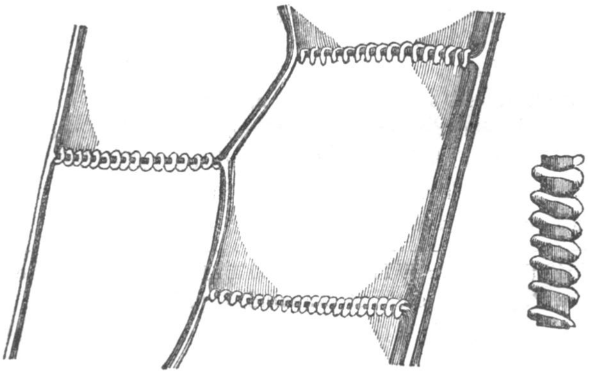
The committee on the following paper by Dr. Joseph Leidy, reported in favor of publication.

On the mechanism which closes the membranous wings of the genus Locusta.

By JOSEPH LEIDY, M. D.

The membranous wings or alæ of the locusts while at rest are folded up, like a closed fan, beneath the anterior pergamentaceous wings. These are opened or expanded by the contraction of appropriate muscles (extensores alæ) contained within the thorax; the tendons of which are inserted into the ribs or longitudinal veins at the root of the wings. When one of the wings is separated from the body of the insect, and stretched open by the fingers, upon letting go, it will be found instantly to close or resume the position of rest.

The mechanism which produces this closure in the separated wing, as well as when attached to the living animal, I find to be spiral ligamentous bands, wound, like the thread of a screw, around the transverse or connecting veins, which latter are also flexible. By this arrangement, upon the contraction of the alary extensors, the spring-like ligaments, or ligamenta spiralia as I will call them, are stretched in the expansion of the wings, and upon the relaxation or cessation of the action of the muscles, the physical properties alone of the ligamenta spiralia, in resuming their unstretched state, close the wings. These ligamenta spiralia are numerous, and exist in all the species of Locusta possessing perfect alæ which I have examined. To this short description I append a drawing of several of these ligaments, magnified, from a preparation in Canada balsam, of one of the alæ of Locusta Carolina.



ELECTION OF CORRESPONDENT.

Prof. Joseph Zuccarini, of Munich, Bavaria, was elected a correspondent of the Academy.

Stated Meeting, October 6, 1846.

VICE PRESIDENT MORTON in the Chair.

DONATIONS TO LIBRARY.

Annals of the Lyceum of Natural History of New York. Nos. 6 and 7, Vol. 4. From the Lyceum.

Sur l'usage inopportun des medicamens. Essai du docteur Ascagne Pisani. Traduit de l'Italien par Louise Desmonceaux. Naples, 1846. 12mo. 3 copies. From the Author.

Annales des Sciences physiques et naturelles publiées par la Societé Royale d'Agriculture, &c., de Lyons. Tomes 8. 8vo. From the Society.

Natural History of the State of New York, (published by authority of the government of the State) 11 vols. 4to., including:

1. Zoology of New York, Parts 1, 2, 3, and 5. By James E. Dekay.
2. Mineralogy of New York. By Lewis C. Beck, M. D.
3. Botany. A Flora of the State of New York. Vol. 1. By John Torrey.
4. Geology and Palæontology; comprising Geology of the 1st Geological district of New York, by William W. Mather: of the second Geological district, by Ebenezer Emmons, M. D.: of the 3d Geological district, by Lardner Vanuxem: of the 4th Geological district, by James Hall.

Also, a Geological map of the State of New York. Purchased by order of the Academy.

Literary Record and Journal of the Linnean Association of Pennsylvania College. Nos. 10 and 11. Vol. 2. From the Association.

Historical collections of Louisiana. By Benjamin F. French. New York, 1846. 8vo. From the Author.